



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/441,539	11/16/1999	STEVEN G. APEL	99-40170-US	4490
28977	7590	08/11/2006	EXAMINER	
MORGAN, LEWIS & BOCKIUS LLP 1701 MARKET STREET PHILADELPHIA, PA 19103-2921			BROWN, RUEBEN M	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/441,539		APEL ET AL.	
	Examiner		Art Unit	
	Reuben M. Brown		2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29 and 31-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29 & 31-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 29 & 31-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Considering claim 29, the instant claim is rejected as not being directed to statutory subject matter. In particular, the claimed language merely recites mathematical computations, and thus are considered abstract ideas and is not patentable. Diehr, 450 U.S. at 185, 209 USPQ at 7; accord, e.g., Chakrabarty, 447 U.S. at 309, 206 USPQ at 197; Parker v. Flook, 437 U.S. 584, 589, 198 USPQ 193, 197 (1978); Benson 409 U.S. at 67-68, 175 USPQ at 675; Funk, 333 U.S. at 130, 76 USPQ at 281. Nor can one patent “a novel and useful mathematical formula, “Flook, 437 U.S. at 585, 198 USPQ at 195.

For claims including such excluded subject matter to be eligible, the claim must be for a practical application of the abstract idea, law of nature or natural phenomenon. Diehr, 450 U.S. at 187, 209 USPQ at 8 (“application of law of nature or mathematical formula to a known structure or process may well be deserving of a patent protection”); Benson, 409, US at 71, 175 USPQ at 676 (rejecting formula claim because it has no substantial practical application”). Thus if the invention “transforms” a particle or physical object to a different state or thing; or produces a useful, concrete or tangible result. However, the examiner does not find that claims 29 & 31 transforms and article or produces a tangible result.

Instead the instant claims recite a method for “determining at least first second, and third correlation values”, “computing a Euclidean distance”, “determining at least fourth, fifth & sixth correlation values” “computing a Euclidean distance”, updating the Euclidean distance”, and “associating the third packet with the known source”. These method steps are directed to mathematical computations and do not recite in the affirmative that a tangible result is achieved. Nor, does the instant claims recite any language that affirms any particle or object is transformed from one state to a different state.

Claims 32-36, which depend from claims 29 & 31, are likewise treated.

Claim 29 is also rejected as being directed to a formula in the abstract. Diehr, 450 U.S. at 191, 209 USPQ at 10, “Phenomenon of nature, though just discovered, mental processes, nor

Art Unit: 2623

abstract intellectual concepts are not patentable, as they are basic tools of scientific and technological work”, Benson, 409 U.S. at 71-72, 175 USPQ at 676; cf. Diehr, 450 U.S. at 187, 209 USPQ at 8 (stressing that the patent applications in that case “did not seek to pre-empt the use of [an] equation, but instead sought only to “foreclose from others the use of that equation in conjunction with all other steps in their claimed process). Even though claim 29 falls within statutory type (i.e. a method), the instant claim is directed to known formula, (i.e., the Euclidean distance).

Allowable Subject Matter

3. Claims 29 & 31-36 are allowed over prior art of record.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2623

Any response to this action should be mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

or faxed to:

(571) 273-8300, (for formal communications intended for entry)

Or:

(571) 273-7290 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reuben M. Brown whose telephone number is (571) 272-7290. The examiner can normally be reached on M-F (9:00-6:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communications and After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Reuben M. Brown

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 29 & 31-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Considering claim 29, the instant claim is rejected as not being directed to statutory subject matter. In particular, the claimed language merely recites mathematical computations, and thus are considered abstract ideas and is not patentable. Diehr, 450 U.S. at 185, 209 USPQ at 7; accord, e.g., Chakrabarty, 447 U.S. at 309, 206 USPQ at 197; Parker v. Flook, 437 U.S. 584, 589, 198 USPQ 193, 197 (1978); Benson 409 U.S. at 67-68, 175 USPQ at 675; Funk, 333 U.S. at 130, 76 USPQ at 281. Nor can one patent “a novel and useful mathematical formula, “Flook, 437 U.S. at 585, 198 USPQ at 195.

For claims including such excluded subject matter to be eligible, the claim must be for a practical application of the abstract idea, law of nature or natural phenomenon. Diehr, 450 U.S. at 187, 209 USPQ at 8 (“application of law of nature or mathematical formula to a known structure or process may well be deserving of a patent protection”); Benson, 409, US at 71, 175 USPQ at 676 (rejecting formula claim because it has no substantial practical application”). Thus if the invention “transforms” a particle or physical object to a different state or thing; or produces a useful, concrete or tangible result. However, the examiner does not find that claims 29 & 31 transforms and article or produces a tangible result.

Instead the instant claims recite a method for “determining at least first second, and third correlation values”, “computing a Euclidean distance”, “determining at least fourth, fifth & sixth correlation values” “computing a Euclidean distance”, updating the Euclidean distance”, and “associating the third packet with the known source”. These method steps are directed to mathematical computations and do not recite in the affirmative that a tangible result is achieved. Nor, does the instant claims recite any language that affirms any particle or object is transformed from one state to a different state.

Claims 32-36, which depend from claims 29 & 31, are likewise treated.

Claim 29 is also rejected as being directed to a formula in the abstract. Diehr, 450 U.S. at 191, 209 USPQ at 10, “Phenomenon of nature, though just discovered, mental processes, nor

Art Unit: 2623

abstract intellectual concepts are not patentable, as they are basic tools of scientific and technological work”, Benson, 409 U.S. at 71-72, 175 USPQ at 676; cf. Diehr, 450 U.S. at 187, 209 USPQ at 8 (stressing that the patent applications in that case “did not seek to pre-empt the use of [an] equation, but instead sought only to “foreclose from others the use of that equation in conjunction with all other steps in their claimed process). Even though claim 29 falls within statutory type (i.e. a method), the instant claim is directed to known formula, (i.e., the Euclidean distance).

Allowable Subject Matter

3. Claims 29 & 31-36 are allowed over prior art of record.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2623

Any response to this action should be mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

or faxed to:

(571) 273-8300, (for formal communications intended for entry)

Or:

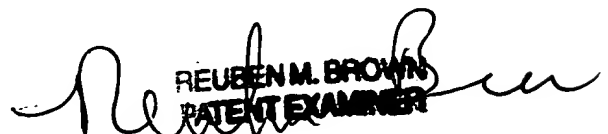
(571) 273-7290 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reuben M. Brown M. Brown whose telephone number is (571) 272-7290. The examiner can normally be reached on M-F(8:30-6:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communications and After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Reuben M. Brown


REUBEN M. BROWN
PATENT EXAMINER